

Product Datasheet

8-Port Full Gigabit Managed Industrial PoE Switch

(B1-IPS33084PFM)



OVERVIEW

B1-IPS33084PFM is a full Gigabit managed industrial PoE switch independently developed by BISMUN. It has 4*10/100/1000M PoE ports and 4*100/1000M SFP fiber slot ports, port 1-4 can support IEEE 802.3af/at standard POE power supply, single port POE power up to 30W, and the maximum POE output power is 60W (at-120W). As a POE power supply device, it can automatically detect and identify the electrical equipment that meets the standard and supply power through the cable. It can supply the POE terminal equipment, such as wireless AP, network camera, network telephone, industrial sensor and so on, to meet the demand for high density PoE power supply network environment. It is suitable for intelligent transportation, rail transportation, electric power industry, mining, metallurgy and green energy construction and so on. A reliable communication network.

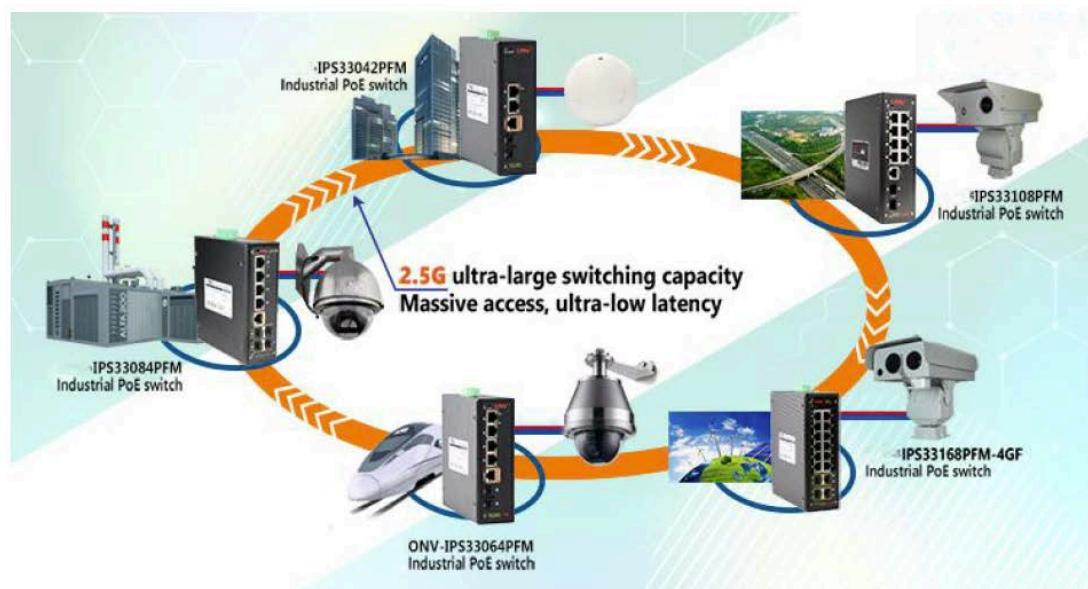
The B1-IPS33084PFM has the L2+ full network management function, support IPV4/IPV6 management, static route full line rate forwarding, security protection mechanism, ACL/QoS policy and VLAN, and is easy to manage and maintain. Support

multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS(<20ms) to improve link backup and network reliability. When one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as PoE power management, port traffic control, VLAN division, and SNMP through the Web network management mode.

FEATURE

■ Gigabit access, SFP fiber port uplink

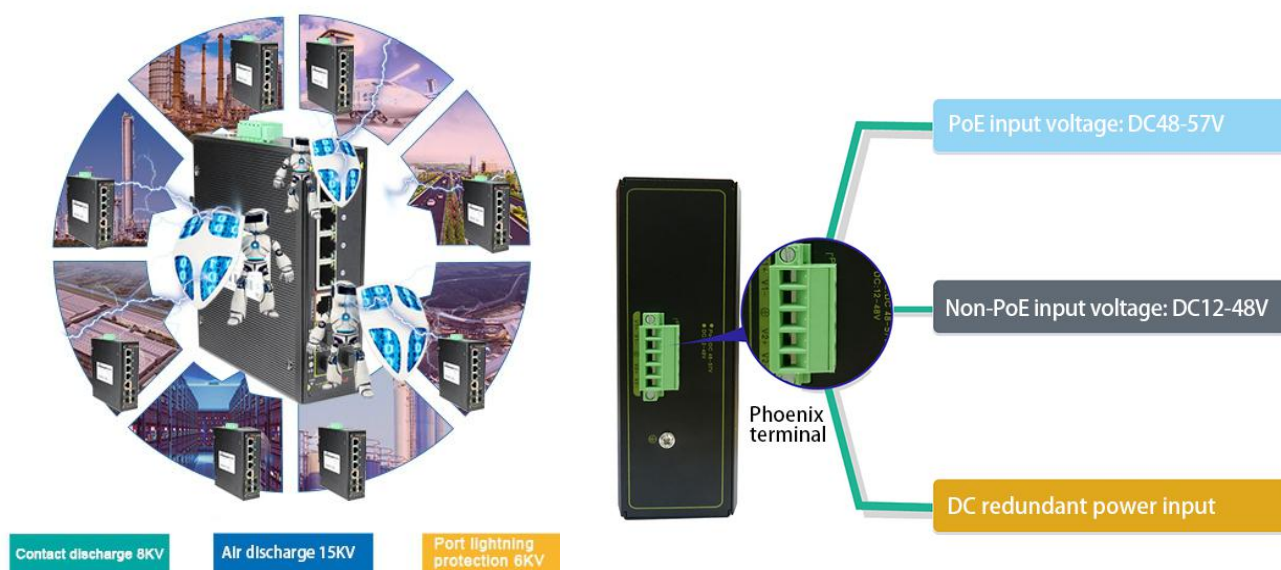
- ◇ All series support “Gigabit Ethernet port and Gigabit SFP port” combination, which enables users to flexibly build networking to meet the needs of various scenarios.
- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on backpressure.



■ Powerful port lightning protection, ultra-wide voltage input

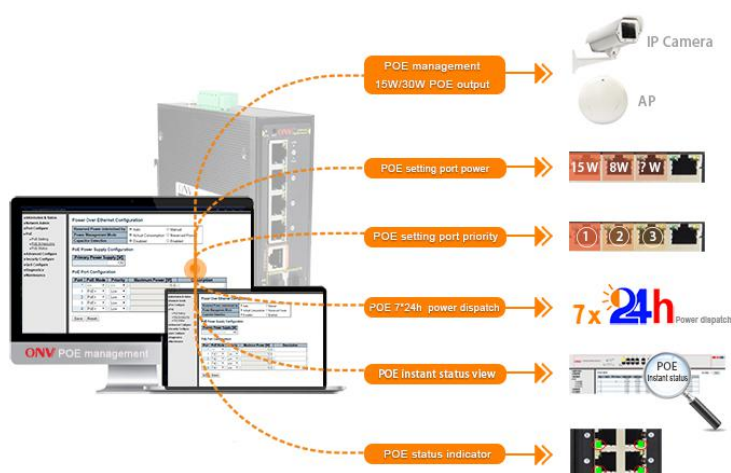
- ◇ Contact discharge 8KV, air discharge 15KV; port lightning protection common-mode 4KV, differential mode 2KV;

- ◇ Industrial dual power input
- ◇ DC INPUT: 48V-57V, non-PoE DC INPUT: 12-48V.



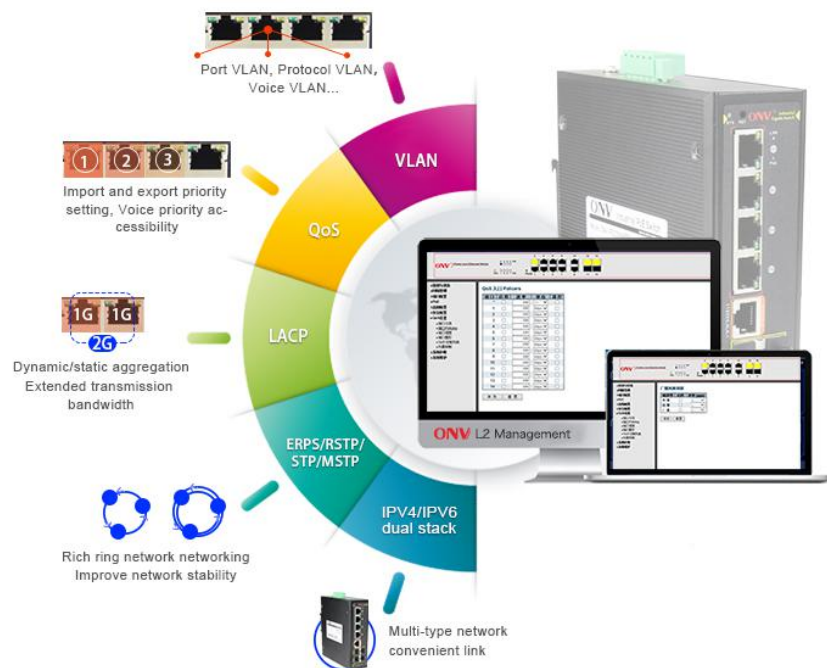
■ Intelligent PoE power supply

- ◇ 4*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.
- ◇ IEEE 802.3af/at PoE standard, without damaging non-PoE devices.
- ◇ Priority system for PoE port, it will supply power to the high priority level port first when the power budget is insufficient and avoid overwork of the device.
- ◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.



■ **PoE network management and fast Ring function**

- ◇ IEEE802.1Q VLAN, flexible VLAN division and QinQ configuration.
- ◇ QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.
- ◇ ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.
- ◇ IGMP V1/V2 and IGMP Snooping.
- ◇ ERPS/STP/RSTP/MSTP.
- ◇ Static and dynamic aggregation.



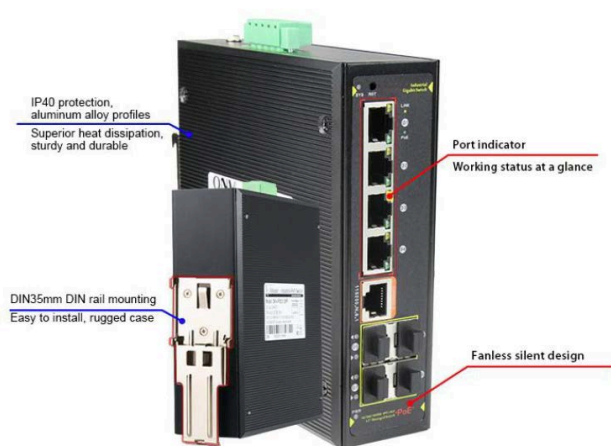
■ **Security**

- ◇ 802.1X authentication.
- ◇ Port isolation, Storm control.
- ◇ IP-MAC-VLAN-Port binding.

■ **Stable and reliable**

- ◇ Low power consumption, fan-less design, aluminum shell.
- ◇ CCC, CE, FCC, RoHS.

- ◇ The user-friendly panel, it can show the device status through the LED indicator of PWR,SYS, Link, L/A, PoE.



■ One-stop remote control and management

- ◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).
- ◇ HTTPS, SSLV3, and SSHV1/V2.
- ◇ RMON, system log, LLDP, and port traffic statistics.
- ◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

TECHNICAL SPECIFICATION

Model	B1-IPS33084PFM	B1-IPS33084PFM-at
Interface Characteristics		
Fixed Port	4*10/100/1000Base-T PoE ports (Data/Power) 4*100/1000Base-X uplink SFP slot ports (Data) 1 * RS232 console port(115200,N,8,1) 2 set of V+, V- redundant DC power interface (5 Pin Phoenix terminal)	
Ethernet Port	Port 1-4 support 10/100/1000Base-T,auto-sensing,Full/half duplex MDI/MDI-X self-adaption	
Twisted Pair	10BASE-T: Cat3,4,5 UTP(≤100 meter)	

Transmission	100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)
SFP Slot Port	Gigabit SFP optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Cable	Multi mode: 850nm 0 ~ 550M, single mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.
Chip Parameter	
Network Management Type	Layer 2+
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-LX/SX/CX, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	192Gbps
Forwarding Rate@64byte	11.9Mpps
MAC	8K
Buffer Memory	4M
Jumbo Frame	9.6K
LED Indicator	Power/ System : SYS (green) , Network: Link (yellow), fiber port: L/A (green), PoE: PoE (green)
Reset Switch	Yes, One-button factory reset
PoE & Power	
PoE Port	Port 1 to port 4
PoE Management	PoE working status Delay start of power supply PoE output priority configuration

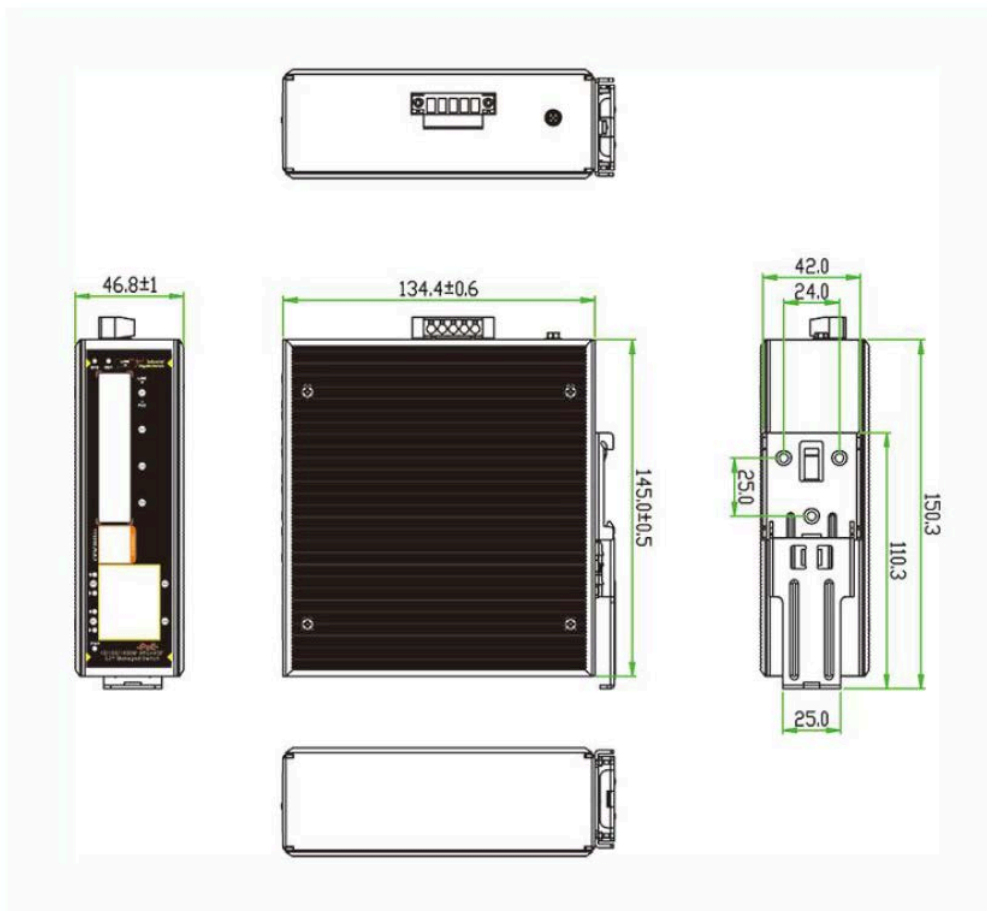
	Scheduling of PoE operation and time Total power limit of PoE power supply PoE output power allocation, off& af &at	
Power Supply Pin	Default: 1/2 (+), 3/6 (-)	
Max Power Per Port	30W; IEEE802.3af/at	
Total PWR / Input Voltage	60W (48VDC)	120W (48VDC)
Power Consumption	Standby<6W, Full load<60W	Standby<8W, Full load<120W
Working Voltage	48-57VDC; 5 Pin industrial Phoenix terminal, support anti-reverse protection.	
Power Supply	No, optional 48V/60W or 48V/120W industrial power supply	
Physical Parameter		
Operation TEMP / Humidity	-40~+80°C;5%~90% RH Non condensing	
Storage TEMP / Humidity	-40~+85°C;5%~95% RH Non condensing	
Dimension (L*W*H)	145*134.5*47.5mm	
Net /Gross Weight	<0.7kg / <0.9kg	
Installation	Desktop, DIN rail	
Certification & Warranty		
Lightning protection / protection level	Lightning protection: 6KV 8/20us; Protection level: IP40 IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge IEC61000-4-3(RS):10V/m(80~1000MHz) IEC61000-4-4(EFT): power cable:±4kV; data cable:±2kV IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz) IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s IEC61000-4-9(pulsed magnet field):1000A/m	

	<p>IEC61000-4-10(damped oscillation):30A/m 1MHz</p> <p>IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV</p> <p>IEC61000-4-16(common-mode transmission):30V; 300V,1s</p> <p>FCC Part 15/CISPR22(EN55022):Class A</p> <p>IEC61000-6-2(Common Industrial Standard)</p>
Mechanical Properties	<p>IEC60068-2-6 (anti vibration)</p> <p>IEC60068-2-27 (anti shock)</p> <p>IEC60068-2-32 (free fall)</p>
Certification	<p>CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B;</p> <p>RoHS;</p>
Warranty	<p>3 years , lifelong maintenance.</p>
Network Management Features	
Interface	<p>IEEE802.3X (Full-duplex)</p> <p>Port temperature protection setting</p> <p>Port green Ethernet Energy-saving setting</p> <p>Broadcast storm control based on port speed</p> <p>The speed limit of the message flow in the access port.</p> <p>The minimum particle size is 64Kbps.</p>
Layer 3 Features	<p>L2+ network management ,IPV4/IPV6 management</p> <p>L3 soft routing forwarding,</p> <p>Static route, Default route @ 128 pcs, APR @ 1024 pcs</p>
VLAN	<p>4K VLAN based on port, IEEE802.1q</p> <p>VLAN based on the protocol</p> <p>VLAN based on MAC</p> <p>Voice VLAN, QinQ configuration</p> <p>Port configuration of Access, Trunk, Hybrid</p>
Port Aggregation	<p>LACP, Static aggregation</p> <p>Max 4 aggregation groups and 8 ports per group.</p>
Spanning Tree	<p>STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)</p>

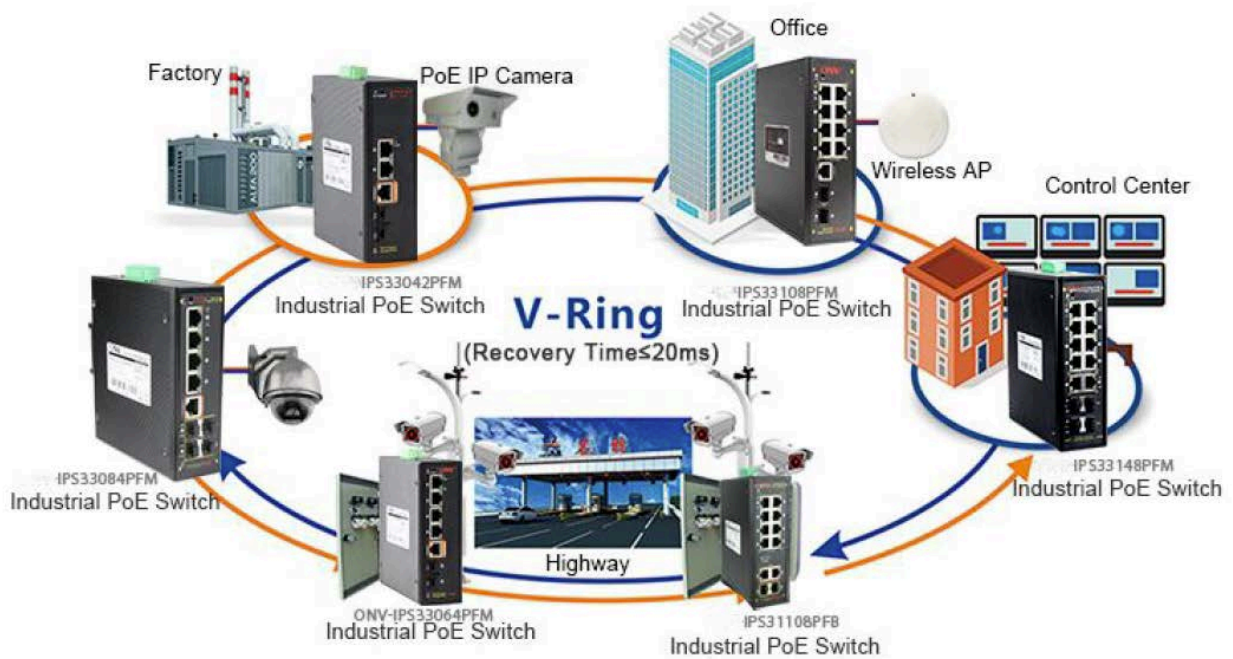
Industrial Ring	G.8032 (ERPS),Recovery time less than 20ms
Network Protocol	250 Ring at most, Max 250 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS,Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL,ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	IP-MAC-VLAN-Port binding ARP inspection,Anti-DoS attack AAA & RADIUS,MAC learning limit Mac black holes,IP source protection IEEE802.1X & MAC address authentication Broadcast storm control,Backup for host datum SSH 2.0,SSL,Port isolation,ARP message speed limit User hierarchical management and password protection
DHCP	DHCP Client,DHCP Snooping,DHCP Server,DHCP Relay
Management	One-key recovery Cable Diagnose,LLDP Web Management (HTTPS) NTP,System work log,Ping Test CPU instant utilization status view

	<p>Console/AUX Modem/Telnet/SSH2.0 CLI</p> <p>Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3</p> <p>ONV NMS - smart network management system platform(LLDP+SNMP)</p>
System	<p>Category 5 Ethernet network cable</p> <p>Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later;</p> <p>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network</p>

DIMENSION



APPLICATION



ORDERING INFORMATION

Model	Description	Recommended Power Supply
B1-IPS33084PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports, Port 1-4 can support	60W
B1-IPS33084PFM-at	IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting.	120W

Note: Industrial PoE switch does not match the SFP optical module and power supply.

PACKING LIST

PACKING LIST	CONTENT	QTY	UNIT
	8-port full gigabit managed industrial PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	User Guide	1	PC
	Warranty Card	1	PC

OPTICAL MODULE INFORMATION

Product	Model	Description	Unit
1.25G Fiber Module	B1-2630	SFP optical module, 1.25G, multi mode dual fiber 850nm, transmission distance: 550m, LC interface, support DDM function, support hot plug and pull.	PC
	B1-2632	SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	B1-2612-T	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	B1-2613-R	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2612-T-G	Industrial SFP optical module, 1.25G, single-mode	PC

		single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	
	2613-R-G	Industrial SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	B1-2612-T-S C	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
	B1-2613-R-S C	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
Power Module	B1-2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

POWER SUPPLY SELECTION TABLE

Product	Model	Description	Unit
65W Desktop Power Adaptor	GWS-AP65-52	Desktop tape 65W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,1.1A Output Voltage:DC 52V 1.25A Operation Temperature:-20℃—+65℃	PC

110W Desktop Power Adaptor	GWS-AP110-52	Desktop tape 110W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,2.0A Output Voltage:DC 52V 2.0A Operation Temperature:-20℃—+65℃	PC
60W DIN Rail Industrial Power Supply	GWS-DP60-48	Din Rail type 60W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz,1A Output Voltage:DC 48V 1.25A Operation Temperature:-40℃—+70℃	PC
120W DIN Rail Industrial Power Supply	GWS-DP120-48	Din Rail type 120W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz,1.5A Output Voltage:DC 48V 2.5A Operation Temperature:-40℃—+70℃	PC

RELATED PRODUCT

Model	Description
B1-IPS33064PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-4 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting.
B1-IPS33108PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting.

B1-IPS33168PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting.
B1-IPS33168PFM-4GF	L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting.
B1-IPS36168PFM	L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 4*1/10G SFP+ slot ports. Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting.



60W/48V Industrial DIN Rail Power Supply (GWS-DP60-48)

60W Industrial Power Supply



- Power Input: AC 90~264V
- Support production for short circuit/over current/over voltage
- Wide operation temperature range: -40°C~70°C
- 100% full load aging test
- High efficiency, long life time and high reliability
- Meet EMC Standard

Application

- Industrial Control System
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

Description

GWS-DP60-48 is one economical slim 60W DIN Rail industrial power supply series, adapting to be installed on TS-35/7.5 or TS-35/15 mounting rails. The entire series adopts the full range AC input from 90VAC to 264VAC and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.

GWS-DP60-48 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 89%, the entire series can operate at the ambient temperature between -40°C to 70°C under air convection. It is equipped with constant current mode for over load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus make GWS-DP60-48 a very competitive power supply solution for industrial applications.

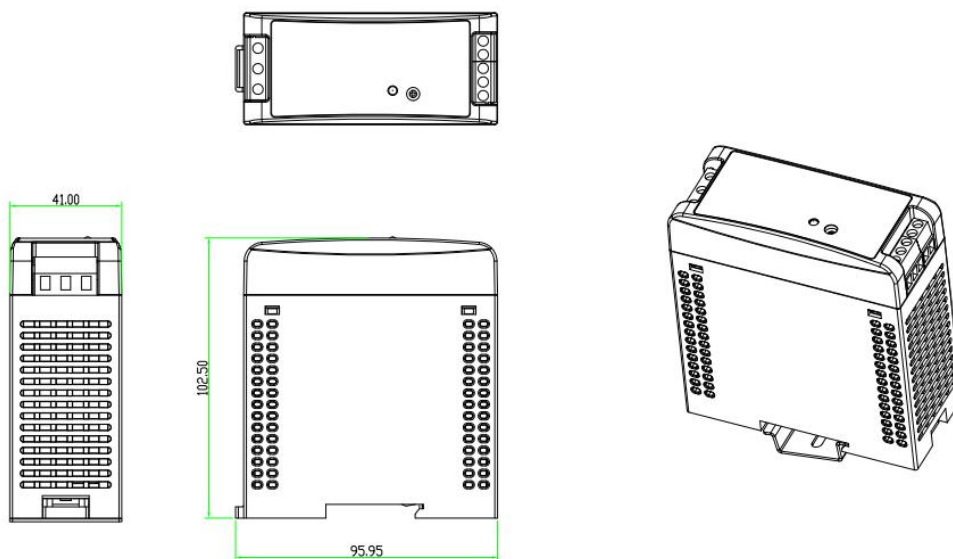
Technical Specification

Model	GWS-DP60-48	
Output	Group of Output	1
	DC Voltage	48V DC
	Default Output Voltage	48.00-48.2V (VIN: 220VAC / LOAD: 0A)
	Output Rated Current	1.25A
	Output Current Range	0-1.25A
	Output Rated Power	60W
	Total Peak Output Power	Up to 90W(Sustainable time <u>10S</u> /220VAC)
	Peak Output Current	1.5A(Sustainable time <u>10S</u> /220VAC)
	Ripple noise	Peak - Peak $\leq 100\text{mV}$ (Test Method: The terminal shall be in parallel with capacitance of 0.1uF and 47uF, testing at 20MHz)
	Output Regulation Range	DC47~56V
	Stabilized Voltage Precision	$\pm 1\%$ (@ 90-264Vac input, 100% load)
	Line Regulation	$\pm 0.5\%$ (@ 90-264Vac input, 100% load)
	Load Regulation	$\pm 1\%$ (@ 90-264Vac input, 100% load)
	Temperature Coefficient	$\pm 0.03\%/^{\circ}\text{C}$
	Output Start Time	$< 1.5\text{S}$ @ 115VAC
	Output Hold Time	$> 20\text{ms}$ @ 115VAC, $> 125\text{ms}$ @ 230Vac (100% load)
Voltage Overshoot	$\leq 5\%$	
Input	Input Voltage Range	90~264VAC
	Input Rated Voltage Range	100~240VAC
	Frequency Range	47Hz~63Hz
	Rated Frequency	50/60Hz
	Starting Voltage	90V AC
	Efficiency	$> 85.0\%$ @ 115Vac, $> 89.0\%$ @ 230Vac
	Input Current	$< 1.40\text{A}$ @ 115Vac, $< 0.80\text{A}$ @ 230Vac
	Inrush Starting Current	$< 20\text{A}$ @ 115Vac, $< 35\text{A}$ @ 230Vac
	Power Factor	PF >0.6 (at full load)

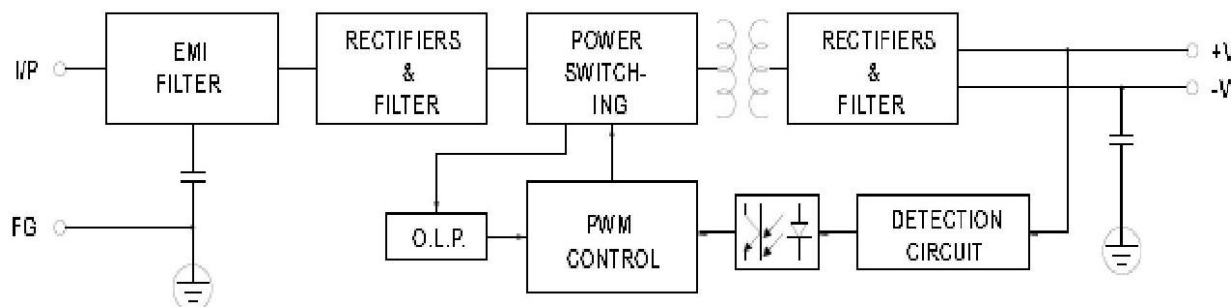
Protection	Output	Over power	78~97W Swing machine (Testing method: Increase the output current until enabling the protection. Protection mode:Swing machine, Self-recovery after over-power released.)
		Over voltage	57~70V Swing machine (Short circuit the Pin1-2 of U8, swing machine. Output recovery to normal after removing the short circuit) Note: Do not use external voltage.
		Over current	1.5~1.875A Swing machine (Testing method: Increase the output current until enabling the protection. Protection mode:Swing machine, Self-recovery after over-current released.)
		Short circuit	It achieves the long-term short circuit by connecting a sufficient cross-sectional area copper cable (Length at 15cm±5cm) with power output port. Self-recovery to normal after removing the short circuit.
Operation Environment	Operation Temperature and Humidity		-40~70℃; 20%~95%RH
	Storage Temperature and Humidity		-40℃~85℃; 10%~95%RH non-condensing
	Vibration		Frequency range: 10 ~ 500Hz, Acceleration: 2G, Each sweep cycle 10min. Six sweeps along the X, Y, and Z axis
	Surge		Acceleration: 20G, Duration time: 11mS, Three shocks along X, Y and Z axis
	Altitude		2000m
Safety and EMC Standard @25℃	Security Standard		GB4943/EN60950 ■Reference □Certification
	Dielectric Strength		Input—Output:3KVAC/10mA; Input--Case:1.5KVAC/10mA; Output--Case:0.5KVDC/10mA Time for each testing is 1min.
	Grounding Test		Test Condition: 32A/2min; Ground bond: < 0.1 ohms.
	Leakage Current		Input to GND ≤3.5mA; Input to output ≤0.25mA (Input 264Vac, 63Hz)
	Insulation Resistance		Input—Output: 10M ohms;

	EMI	Conducted Interference	EN55022, EN55024, FCC PART 15 CLASS B
		Radiated Interference	EN55022, EN55024, FCC PART 15 CLASS B
Harmonic current		EN61000-3-2 CLASS D	
EMS	Conducted Emission	EN61000-4-6 Level3	
	Radiated Emission	EN61000-4-3 Level3 criterion B	
	Power Frequency Emission	EN61000-4-8 Level3	
	Electrostatic Emission	EN61000-4-2 Level4 criterion B	
	EFT	EN61000-4-4 Level4 criterion B	
	Surge	EN61000-4-5 Level4 criterion B	
	Dip and Interruption	EN61000-4-11	
Dimension (L*W*H)			93*102.5*41mm

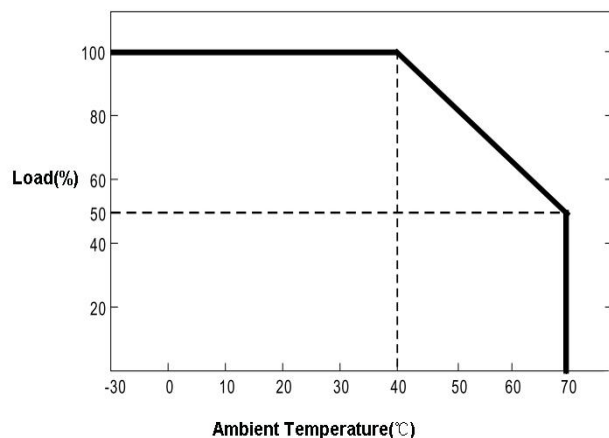
Dimension



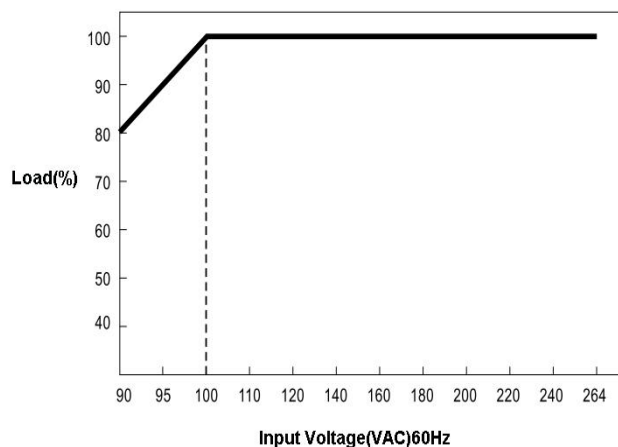
Block Diagram



Derating Curve



Static Characteristic Curve



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